

Remarks

In this Amendment and Response After Final, amendments to claims 1, 3, 8, 9, 10, 18, and 22 to 26 are being offered, and cancellation of claims 16 and 17 is being proposed. Upon entry of these proposed amendments, claims 1 to 15, 18, and 22 to 26 will remain pending in the present application. Applicants submit that entry of the proposed amendments will place the application in condition for allowance and entry of the amendments is respectfully requested.

Procedural Rejections

In the Final Office Action mailed on October 19, 2004, the Examiner rejected claims 23 to 25 under 35 U.S.C. §112, second paragraph as depending from a cancelled claim. These rejections are respectfully traversed. These claims have been amended to depend from claim 22, as noted by the Examiner. Entry of the amendments and withdrawal of the rejection is respectfully requested.

Substantive Rejections

The Examiner rejected claims 1 to 18 and 22 to 26 under 35 U.S.C. §102(b) as anticipated by Vilian, U.S. Patent No. 4,704,049. These rejections are respectfully traversed.

With the proposed amendments, claim 1 recites, in part, a stabilization system for a section of a submarine elongate structure, the system including an end restraint on each end of the section of the elongate structure to transfer tension generated by lateral movement of the elongate structure to the seabed. Each restraint includes a pair of restraint faces spaced apart to receive a length of the elongate structure. Each face is configured to operate along and control curvature of the length during such lateral movement. Each face provides for lateral movement.

Vilian discloses a pair of restraints 17 and 17a including a spring 21 and a weight 20 to bias the elongate structure to a particular position. However, restraints 17 and 17a do NOT receive a length of the elongate structure, nor do the restraints operate along the structure to control curvature of the structure during lateral movement of the structure. No element of Vilian is disclosed which would control curvature of the elongate structure, as recited in claim 1. Rather than controlling curvature, Vilian discloses that while the pipeline may be urged away from the seabed by supports 17, the pipeline is allowed to move freely in all directions under the effect of external forces (col. 3, lines 45 to 56). The only limit disclosed on the movement of the

pipeline is a device such as bolts 14 to lock the pipeline axially relative to guidance means 4 (col. 3, lines 28 to 30). Without some limit on the lateral movement of the pipeline, the guidance means 4 and the support structure 17 can not operate to control curvature of the pipeline.

For at least these reasons, Applicants submit that claim 1 is not anticipated by the cited prior art and that claim 1 is in condition for immediate allowance. Entry of the amendments, reexamination and reconsideration is respectfully requested.

Claims 2 to 7 depend from and further limit claim 1. For the same reasons stated above with regard to claim 1, Applicants submit that claims 2 to 7 are not anticipated by the cited prior art and that claims 2 to 7 are in condition for immediate allowance. Entry of the amendments, reexamination and reconsideration is respectfully requested.

Claim 8, as amended, recites in part a stabilization system for a section of a submarine elongate structure with an end restraint at each end of the section of the elongate structure and at least one intermediate restraint between the two end restraints. Each end restraint is adapted to be secured to the elongate structure to transfer axial tension generated by lateral movement of the elongate structure to the seabed or ground on which the end restraint is installed. Each restraint comprising a pair of restraint faces spaced apart to receive a length of the elongate structure, each face being configured to operate along and control curvature of the length of the elongate structure during lateral movement thereof, each face providing for lateral movement of the length of the elongate structure within the restraint.

As noted above with regard to claim 1, Vilian does not disclose a restraint which is configured to control curvature of a section of an elongate structure. In fact, Vilian discloses a structure whose purpose is to permit free movement of the pipeline in response to external forces. Further, the guidance means of Vilian is not disclosed as allowing lateral movement of the pipeline within the guidance means and does appear to not allow lateral movement of the pipeline as shown in the prior art. Vilian actually teaches away from any need for such lateral movement by having the guidance means supported in such a manner as to permit the guidance means to move laterally. Lateral movement of the pipeline within the guidance means is thus not disclosed by Vilian. For at least these reasons, Applicants submit that claim 8 is not anticipated by the cited prior art and that claim 8 is in condition for immediate allowance. Entry of the amendments, reexamination and reconsideration is respectfully requested.

Claim 9, as amended, recites in part a restraint device comprising a pair of restraint faces spaced apart to receive a length of an elongate structure. Each restraint face is configured to operate along and control curvature of the length of the elongate structure during lateral deflection of the section. Each restraint face also provides for lateral movement of the length of the elongate structure within the restraint.

As noted above with regard to claim 1, Vilian does not disclose a restraint which is configured to control curvature of a section of an elongate structure. In fact, Vilian discloses a structure whose purpose is to permit free movement of the pipeline in response to external forces. Further, the guidance means of Vilian is not disclosed as allowing lateral movement of the pipeline within the guidance means and does appear to not allow lateral movement of the pipeline as shown in the prior art. Vilian actually teaches away from any need for such lateral movement by having the guidance means supported in such a manner as to permit the guidance means to move laterally. Lateral movement of the pipeline within the guidance means is thus not disclosed by Vilian. For at least these reasons, Applicants submit that claim 9 is not anticipated by the cited prior art and that claim 9 is in condition for immediate allowance. Entry of the amendments, reexamination and reconsideration is respectfully requested.

Claims 10 to 15 depend from and further limit claim 9. For the same reasons stated above with regard to claim 1, Applicants submit that claims 10 to 15 are not anticipated by the cited prior art and that claims 10 to 15 are in condition for immediate allowance. Entry of the amendments, reexamination and reconsideration is respectfully requested.

Claim 18, as amended, recites in part a method of stabilizing a submarine elongate structure comprising the steps of anchoring two axially spaced apart sections of the elongate structure to the seabed or ground using end restraints. One or more intermediate restraints are installed between the two end restraints. Each restraint presents two restraint faces on opposed sides of the elongate structure. Each restraint face is configured for receiving a length of the elongate structure and limiting curvature of the elongate structure by operating along the length of the elongate structure. Each restraint face also provides for lateral movement of the elongate structure within the restraint.

As noted above with regard to claim 1, Vilian does not disclose a restraint which is configured to control curvature of a section of an elongate structure. In fact, Vilian discloses a structure whose purpose is to permit free movement of the pipeline in response to external forces.

Further, the guidance means of Vilian is not disclosed as allowing lateral movement of the pipeline within the guidance means and does appear to not allow lateral movement of the pipeline as shown in the prior art. Vilian actually teaches away from any need for such lateral movement by having the guidance means supported in such a manner as to permit the guidance means to move laterally. Lateral movement of the pipeline within the guidance means is thus not disclosed by Vilian. For at least these reasons, Applicants submit that claim 18 is not anticipated by the cited prior art and that claim 18 is in condition for immediate allowance. Entry of the amendments, reexamination and reconsideration is respectfully requested.

Claim 22, as amended, recites in part a stabilization system for a section of a submarine elongate structure, the stabilization system including a restraint for limiting the lateral movement of the elongate structure. The restraint includes two restraint means laterally spaced apart so as to be arranged to allow the pipeline to extend therebetween. Each of the restraint means is configured to allow lateral movement of the elongate structure proximate the restraint means, during which lateral movement the restraint means controls curvature of the elongate structure by impressing a characteristic curvature of the restraint means therealong.

As noted above with regard to claim 1, Vilian does not disclose a restraint which is configured to control curvature of a section of an elongate structure. In fact, Vilians discloses a structure whose purpose is to permit free movement of the pipeline in response to external forces. Further, the guidance means of Vilians is not disclosed as allowing lateral movement of the pipeline within the guidance means and does appear to not allow lateral movement of the pipeline as shown in the prior art. Vilians actually teaches away from any need for such lateral movement by having the guidance means supported in such a manner as to permit the guidance means to move laterally. Lateral movement of the pipeline within the guidance means is thus not disclosed by Vilians. Nothing in Vilians is disclosed as including a characteristic curvature or impressing any curvature on the pipeline. For at least these reasons, Applicants submit that claim 18 is not anticipated by the cited prior art and that claim 18 is in condition for immediate allowance. Entry of the amendments, reexamination and reconsideration is respectfully requested.

Claims 23 to 26 depend from and further limit claim 22. For the same reasons stated above with regard to claim 1, Applicants submit that claims 23 to 26 are not anticipated by the

cited prior art and that claims 23 to 26 are in condition for immediate allowance. Entry of the amendments, reexamination and reconsideration is respectfully requested.

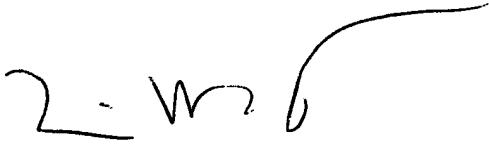
If the Examiner has any questions regarding this Amendment and Response After Final, the Examiner is invited to contact Applicants' representative Brian H. Batzli at 612.336.4755.

Respectfully submitted,

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